

Work Order ID 154244

Wednesday, December 07, 2016 8:54:12 AM

154244

RH

OFFSHORE

Page 1

Item ID: D119-646-143

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016 Start Qty: 1.00 *1*

Cust Item ID:

Required Date: 1/5/2017 Req'd Qty: 1.00 *1*

Customer:

Reference:

Approvals: Process Plan: VS Date: 12/12/07

Tooling: _____ Date: _____

Run Start *NR1*

QC: _____ Date: _____

SPC (Y/N): _____ Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D3905-043	D(DEO)
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IIN-D119-646	C
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100 Document Control

0.00

100

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile & type labels per PPP D119-646-143
CHG 004

N/A

110

0.00

110

Skidtubes

Memo

0.00

Skidtubes

1- Inspect Mat'l D2500-1-190 for damage
2- Ensure squareness of ends

> DP 16-12-12

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐				
Date : _____	Step #: _____	QTY Effective : _____			MRB (QSI042) Approval	
Description Work Order Deviation		Disposition				
					Completed By	
					Lead hand / Supervisor Approval Verification	
					QC / QA Coordinator Approval	
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : _____						

Work Order ID 154244

Wednesday, December 07, 2016 8:54:12 AM

154244

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Item ID: D119-646-143 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH
Start Date: 12/12/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 1/5/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	Chemical Conversion Coat per QSI005 4.1	0.00							
120									
HandFinish	Memo	0.00							
Hand Finishing									
130	QC7-Inspect Chemical Conversion Coat	0.00							
130									
QC	Memo	0.00							
Quality Control									

Handwritten notes: 1 0 16-12-14 19 2-00
Handwritten signature: [Signature] 16-12-14

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
1403 121 100-0								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause				FAULT CATEGORY					
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐				Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐					
OTHER : _____									

Work Order ID 154244

Wednesday, December 07, 2016 8:54:12 AM

154244

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Item ID: D119-646-143

Accept

N900040100

Setup

Start

NS1

Revision ID:

Stop

NS2

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016 Start Qty: 1.00

1

Cust Item ID:

Required Date: 1/5/2017 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

150

0.00

150

Skidtubes

Skidtubes

Memo

0.00

1- Install drill jig DT9480 drill all x-bolt spacer holes using 3/16 drill first side only.

2- 2nd side, locating from first saddle holes use DT9861 A/B to drill 2nd side fwd saddle holes.

3- 2nd side locating from fwd saddle drill remaining crossbolt spacer holes using DT9480

4- Scribe batch # inside aft end of tube

16-12-14 JH

155

0.00

155

CNC Bend 1

CNC Delta 100 Bender

Memo

0.00

1- Bend AFT end of tube using CNC Bender 1 and bend prog. D3905 AFT as per dwg D3905. Must use bending Aid DT9538, located 23.25" from Aft end.

2- Ensure bending Aid DT9538 is positioned correctly, that the bender set up in on full wide and that the indexing ridge is covered with graphite grease.

16-12-14 JH

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Wednesday, December 07, 2016 8:54:12 AM

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Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Cust Item ID:

Customer:

Run Start *NR1*

Stop *NR2*

OC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

165

165

QC

Quality Control

Operation Description

QC5- Inspect part completeness to step on W/O

Memo

Set Up/
Run Hours

0.00

0.00

Tool ID**Tool #****Plan
Code**

Accept
Qty

Reject
QtyReject
Number

**Insp.
Stamp**

16-12-14

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐		FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐		Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : ☐							

Work Order ID 154244***154244***

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Wednesday, December 07, 2016 8:54:12 AM

Item ID: D119-646-143 Accept *N900040100* Setup Start *NS1*
Revision ID: Stop *NS2*
Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH
Start Date: 12/12/2016 Start Qty: 1.00 *1* Cust Item ID:
Required Date: 1/5/2017 Req'd Qty: 1.00 *1* Customer:
Reference:

Approvals: Process Plan: Date: Tooling: Date: Run Start *NR1*
QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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180

180

Skidtubes

Skidtubes

Memo

1- Verify dimention of bend as per dwg D3905

2- Buff out marks left from bending.

3- Drill Aft Float bag holes using DT9493 as per dwg D3905 detail G and section F-F, spot face most fwd, top facing float bag holes to 0.5626" to accomodate insert (1 per side) open to finished size

4- Drill Aft wearplate and wearpad holes using DT9545 as per dwg D3905 detail H open to finished size

5- Open x-bolt spacer holes to finished size as per dwg (sections D-D and E-E)
DO NOT OPEN FWD SADDLE HOLES

6- Deburr, blow out chips from inside of tube

7-Bond web in place as per Dwg D3905 & QSI 015.

A/RSikaflex-291 136093Sikaflex expire date: 17-2-16Start: 7:45Time: 7:45

Finish: _____

Time: _____

***** (Adhere for 12 hours) *****

0.00

H-5.25"

16-12-15

JH

16-12-15

JH

16-12-15

JH

16-12-15

JH

16-12-15

JH

16-12-15

JH

16-12-15

JH

16-12-15

JH

16-12-15

JH

16-12-15

JH

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step # : _____		QTY Effective : _____			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : _____									

Work Order ID 154244

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Wednesday, December 07, 2016 8:54:12 AM

Item ID: D119-646-143 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH
 Start Date: 12/12/2016 Start Qty: 1.00 *1* Cust Item ID:
 Required Date: 1/5/2017 Req'd Qty: 1.00 *1* Customer:
 Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start *NR1*
 QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
190	QC5- Inspect part completeness to step on W/O	0.00							
190									
QC	Memo	0.00							
Quality Control									
200		0.00							
200									
CNC Bend 1	Memo	0.00							
CNC Delta 100 Bender	1- Bend Fwd end of tube using bender 1 and bend prog. D3905 Fwd.Use bending aid DT9544 ensure proper positioning 2- Cut Fwd end of tube as per dwg. ***VERIFY MEASUREMENT BEFORE CUTTING***								

DAS
03
9-09

16-12-20

1 0 16-12-20

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Wednesday, December 07, 2016 8:54:12 AM

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N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 12/12/2016 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 1/5/2017 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop *NR2*

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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210

0.00

210

0.00

Skidtubes

Skidtubes

Memo

1- Buff out marks left from bending

2- Drill Fwd cap holes using DT8215.

3- Open Fwd saddle holes to finished size as per dwg

4- Drill Fwd x-bolt hole using DT9816 and open to finished size as per dwg.

5- Drill 1.87" and 3.74 holes using DT10045 A&B locate from FWD saddle hole hole. (verify measurement) as per dwg.

6- Drill tarring hole and open to finished size using DT10047 locate from fwd saddle hole.

7- Drill wearplate holes using DT9613, open to finished size as per dwg D3905-043

8- Open FWD & AFT cap holes as dwg.

9- C'sink FWD cap hole as per detail "C"

10- Deburr, blow out chips from inside of tube.

16-12-21 JH

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 154244***154244***

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Wednesday, December 07, 2016 8:54:12 AM

Item ID: D119-646-143

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 1/5/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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220

QC5- Inspect part completeness to step on W/O

0.00

220

QC

Memo

0.00

Quality Control

DAS
18
9-00

1 0 17-02-27

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed:

Date:

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐																																					
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OTHER : ☐																																																													

Work Order ID 154244***154244***

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Wednesday, December 07, 2016 8:54:12 AM

Item ID: D119-646-143

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 1/5/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
224		0.00							

224

Skidtubes

Skidtubes

Memo

0.00

NOTE: TACK IN 2 MOST FWD X-BOLT SPACERS AND TEST FIT FWD
GROUND HANDLING FIXTURE, IF FIXTURE FITS WELL THEN
PROCEED. FIXTURE DT10091.

1- Countersink x-bolt holes as per dwg

2- Remove alodine prepare for welding

3- Insert x-bolt spacers

4- Weld x-bolt spacer as per dwg

A/R Alum rod Batch: M13658

5- Grind welds flush as per dwg

6- Counter bore x-bolt holes as per dwg

7- Deburr

BE17-03-02

17-3-3

BE17-02-27

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
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Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER :							
Misidentified ☐	Past Due ☐								

Work Order ID 154244***154244***

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Wednesday, December 07, 2016 8:54:12 AM

Item ID: D119-646-143

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016 Start Qty: 1.00 ***1***

Cust Item ID:

Required Date: 1/5/2017 Req'd Qty: 1.00 ***1***

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
225	QC5- Inspect part completeness to step on W/O	0.00							
225									
QC	Memo	0.00							
Quality Control	TEST FIT USING FIXTURE DT10091.								
226	QC10- Inspect visual per QSI004- ground welds	0.00							
226									
QC	Memo	0.00							
Quality Control									
227	Pressure Wash per QSI005 4.3	0.00							
227									
HandFinish	Memo	0.00							
Hand Finishing	AND REALODINE AS PER PAR09-043								

① 17-0303 PD

① 17-0303 PD

① X1 2017/03/09
BEB



Work Order update only

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Water Jet ☐ Engineering ☐ Machining ☐ Prod. Eng. Coord. ☐ Quality ☐ Thermoforming ☐ Rec/Store/Packaging ☐ Other ☐ Large Fab ☐ Supplier ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval	
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause Environment ☐ No Re-verification ☐ Design ☐ Operator ☐ Doc/Data ☐ Offset/Setup ☐ Equip/Tooling ☐ Supplier ☐ Handling/Pre ☐ Training ☐ Material ☐ Use for Testing ☐ Internal Transport ☐ Poor Information ☐ Tribal Knowledge ☐ Rushing ☐ LOA ☐ Product Improvement ☐ Substation ☐ Process Improvement ☐ Past Expiry Date ☐ Manufacturing Process ☐ Misidentified ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Temperature/Cure ☐ Power Loss/Surge ☐ Positioned Wrong ☐ Bending ☐ Set-up ☐ Folio/Program ☐ Outside Dimensions ☐ Centre Not Concentric ☐ BOM/Route ☐ Grain ☐ Over/Under tolerance ☐ Cracks ☐ Broken/Damage/Defect ☐ Weld ☐ Part Incorrect ☐ Crimp/Kink/Ripple/Wave ☐ Inspection Incomplete/Unqualified ☐ Wrong Stock Pulled ☐ Part Lost/Missing ☐ Cuffs ☐ Contamination ☐ Out of Sequence ☐ Part Moved ☐ Crushing ☐ Countersink ☐ Off-set ☐ Drawing ☐ Heat Treat ☐ Cut Too Short ☐ Mislabeled ☐ Finish ☐ Wave/Twist in Tube ☐ Instructions Incomplete/Unclear ☐ Fit/Function ☐ Misread ☐ Marks/Chatter ☐ Drill Holes ☐ Misaligned/off center ☐ Turning Sequence ☐							
OTHER :									

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154244

Page 11

Accept

N900040100

Setup Start *NS1*

Stop *NS2*

Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016 **Start Qty:** 1.00 ***1***

Cust Item ID:

Required Date: 1/5/2017 **Req'd Qty:** 1.00 ***1***

Customer:

Reference:

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Run Start *NR1*

QC: _____ **Date:** _____ **SPC (Y/N):** _____ **Date:** _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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240

0.00

240

0.00

SprayPaint

Spray Painting

Memo

*****AS PER DEO DETAIL "K" NOTE 13 MASK THIS AREA, DO NOT
APPLY PRIMER OR PAINT*****

PRIME AS PER DWG AND QSI 005 4.2

BATCH: 136429

PAINT WHITE AS PER DWG AND OSI 005 4.2

BATCH: 136731

245

QC14- Inspect Spray Paint

0.00

245

QC

Memo

0.00

Quality Control

IRH c | 11/08

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐		OTHER : _____					

Wednesday, December 07, 2016 8:54:12 AM

154244

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N900040100

Setup Start *NS1*

Stop *NS2*

Stop *NS2*

Cust Item ID:

Customer:

Reference:

Run Start *NR1*

Stop ***NR2***

250

0.00

250

HandFinish

Hand Finishing

Memo

1-Install inserts as per Dwg D3905.

0.00

260

QC5- Inspect part completeness to step on W/O

0.00

260

OC

Quality Control

Memo

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
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Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐								
OTHER : _____									

Work Order ID 154244***154244***

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Wednesday, December 07, 2016 8:54:12 AM

Item ID: D119-646-143 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH
Start Date: 12/12/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 1/5/2017 Req'd Qty: 1.00 ***1*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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270

0.00

270

HandFinish

Hand Finishing

Memo

0.00

1-Install wearpads, gaskets and wearplates as per Dwg D3905. Put sikaflex in insert before installing bolts and washers

A/RSikaflex-240/-291

Sikaflex expire date:

2- install plugs assembly with o-ring lube as per dwg.

A/R o-ring lube 55 Batch:

3 -Inspect for foreign objects as per QSI 024

4 -Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/RSikaflex-240/-291

Sikaflex expire date:

5- Wing Walk as per dwg QSI005 4.4

Batch: 14136886

6- Install (2)D5101-041 and (1)D5101-047 as per dwg by using DT10117

IRH d JH 17/03/13

598 RTU M 136385 18b4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width: 100%; border: none;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause <table style="width: 100%; border: none;"> <tr> <td style="width: 50%;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width: 50%;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> </tr> </table>		Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	FAULT CATEGORY <table style="width: 100%; border: none;"> <tr> <td style="width: 33%;"> Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> <td style="width: 33%;"> Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> <td style="width: 33%;"> Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> <td style="width: 33%;"> Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> </tr> </table>						Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐												
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐																								
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OTHER : ☐																									

Work Order ID 154244***154244***

Page 14

Wednesday, December 07, 2016 8:54:12 AM

Item ID: D119-646-143 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH
Start Date: 12/12/2016 Start Qty: 1.00 ***1*** Cust Item ID:
Required Date: 1/5/2017 Req'd Qty: 1.00 ***1*** Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
280	QC5- Inspect part completeness to step on W/O	0.00							
280									
QC	Memo	0.00							
Quality Control									
290	Identify as per dwg & Stock Location: _____	0.00							
290									
Packaging	Memo	0.00							
Packaging									
300	QC21- Final Inspection - Work Order Release	0.00							
300									
QC	Memo	0.02							
Quality Control									

DAS
21
9-88

MAR 1 6 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Picklist Print

Wednesday, December 07, 2016 8:54:20 AM

Page 1

Work Order ID: 154244

154244

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016

Required Date: 1/5/2017

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP RevA: New issue DD verified by:EC IPP REVb
12.11.05 (DEOD3905-B-1)(ecn 12-675) DD verf:JLM IPP REV:C 13.03.20
per chg003 ECN13-534 DD verf:JLM IPP REV:D 15.01.19 AS PER ECN-
14-628 DD verf:JLM IPP REV:E 16.11.02 chg as per D3905
revD(DEO) DD verf:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

AN4C46A

Purchased

No

270

Each

172.0000

3

3

AN4C46A

Bolt

**

11 17/03/13

Location

Loc Qty

Loc Code

FG

8

123642

2

m132169

6

OVER002

140

m135312

70

m135721

70

ST341

24

m131856

7

m135311

17

X3

D5101-041

Manufactured

No

270

Each

37.0000

2

2

D5101-041

Crossbolt Spacer Assembly

**

11 17/03/13

Location

Loc Qty

Loc Code

FP001

37

137417

5

139261

2

140171

18

143449

12

X2

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
OTHER : ☐									

Wednesday, December 07, 2016 8:54:20 AM

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
				Completed By					
				Lead hand / Supervisor Approval Verification					
				QC / QA Coordinator Approval					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐	☐	Pressure/Forced ☐	☐	Temperature/Cure ☐	☐
Design ☐	☐	Operator ☐	☐	Bending ☐	☐	Set-up ☐	☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Centre Not Concentric ☐	☐	BOM/Route ☐	☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Cracks ☐	☐	Broken/Damage/Defect ☐	☐
Handling/Pre ☐	☐	Training ☐	☐	Crimp/Kink/Ripple/Wave ☐	☐	Inspection Incomplete/Unqualified ☐	☐
Material ☐	☐	Use for Testing ☐	☐	Cuffs ☐	☐	Contamination ☐	☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crushing ☐	☐	Countersink ☐	☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Heat Treat ☐	☐	Cut Too Short ☐	☐
LOA ☐	☐	Product Improvement ☐	☐	Wave/Twist in Tube ☐	☐	Instructions Incomplete/Unclear ☐	☐
Substation ☐	☐	Process Improvement ☐	☐	Marks/Chatter ☐	☐	Drill Holes ☐	☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	OTHER : _____			
Misidentified ☐	☐	Past Due ☐	☐				

Picklist Print

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Wednesday, December 07, 2016 8:54:20 AM

Work Order ID: 154244

154244

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016

Required Date: 1/5/2017

MS21043-4

Purchased

No

270

Each

Start Qty: 1.00
1,180.000 3 3

Required Qty: 1.00

MS21043-4

Nut

**

all v103k2

Location

Loc Qty

Loc Code

FG

40

104603

40

GA

17

m132803

17

over003

400

m136148

400

OVER007

600

m136192

300

m136263

300

x3

ST302

123

m135600

123

D2500-1-190

Manufactured

No

110

Each

96.0000 1 1

D2500-1-190

Ext'n -I' Beam Tube 4"

**

D 16-12-12

Location

Loc Qty

Loc Code

HALL

96

145247

11

151612

85

Each

69.0000

1

2

**

8516 17-02-27

D2579

Manufactured

No

D2579

Crossbolt Spacer

Location

Loc Qty

Loc Code

LG001

69

123997

1

141711

68

2

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER :							

Picklist Print

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Wednesday, December 07, 2016 8:54:20 AM

Work Order ID: 154244

154244

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016

Required Date: 1/5/2017

D2855-3

Manufactured No

270

Each

4.0000

Start Qty: 1.00

2

2

Required Qty: 1.00

D2855-3

Cap

**

all 17/03/17

Location

Loc Qty

Loc Code

FP001

4

B151614

142564

4

B153291

D3492-5

Manufactured No

270

Each

200.0000

16

16

D3492-5

Plug

**

all 17/03/17

Location

Loc Qty

Loc Code

FP001

200

B134740

133396

8

136396

6

152195

183

152814

3

NAS1611-005

Purchased No

270

Each

182.0000

16

16

NAS1611-005

O-RING

**

all 17/03/17

Location

Loc Qty

Loc Code

FP001

182

M136370

m136184

90

m136192

92

x16

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : _____							

Picklist Print

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Wednesday, December 07, 2016 8:54:20 AM

Work Order ID: 154244

154244

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016

Required Date: 1/5/2017

D3672-1 Manufactured No 270 Each 948.0000 Start Qty: 1.00 Required Qty: 1.00
 ** all 17/03/17

D3672-1

Washer, Phenolic

Location	Loc Qty	Loc Code
FG	10	
85222	10	
FP001	780	
112218	4	
134785	276	x2
150074	500	
ST049	158	
147077	158	

D3681-1

Manufactured No

190 Each 97.0000 8 8

**

BE170227
B155806 *8

D3681-1

Spacer

Location	Loc Qty	Loc Code
LG001	97	
145956	1	
151967	4	
152459	92	

D3847-1

Manufactured No

270 Each 82.0000 8 8

**

all 17/03/17

D3847-1

Wearpad

Location	Loc Qty	Loc Code
FP001	82	B154780
152441	9	x5
153009	15	
153010	22	
153011	22	x3
153503	14	

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause			FAULT CATEGORY		
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____			
Misidentified ☐	Past Due ☐				

Picklist Print

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Wednesday, December 07, 2016 8:54:20 AM

Work Order ID: 154244

154244

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016

Required Date: 1/5/2017

Start Qty: 1.00

Required Qty: 1.00

D3847-11 Manufactured No

270 Each 6.0000 1 1

D3847-11

Wearpad

**

all 17/03/17

Location

Loc Qty

Loc Code

FP001

6

B145349

151985

4

151986

2

D3847-043 Manufactured No

270 Each 10.0000 1 1

D3847-043

Wearplate Fwd

**

all 17/03/17

Location

Loc Qty

Loc Code

FP002

10

139751

2

153533

8

D3847-045 Manufactured No

270 Each 6.0000 1 1

D3847-045

Wearplate Center

**

all 17/03/17

Location

Loc Qty

Loc Code

FP002

6

B153474

136771

2

139752

4

D3847-049 Manufactured No

270 Each 12.0000 1 1

D3847-049

Aft Wearplate Assembly, Float Gear

**

all 17/03/17

Location

Loc Qty

Loc Code

FP002

12

139750

12

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐			

Picklist Print

Page 7

Wednesday, December 07, 2016 8:54:20 AM

Work Order ID: 154244

154244

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016

Required Date: 1/5/2017

D3885-3 Manufactured No 170 Each 4.0000 1 1 **Start Qty: 1.00** **Required Qty: 1.00**
D3885-3 ****** 16-12-15/LL
 Float Web ①

Location	Loc Qty	Loc Code
LG002	4	
140548	4	

D3903-1 Manufactured No 190 Each 116.0000 12 12 **Start Qty: 1.00** **Required Qty: 1.00**
D3903-1 ****** 361702-27
 Spacer 8154083-12

Location	Loc Qty	Loc Code
LG001	116	
152993	116	

D3672-3 Manufactured No 270 Each 1,152.000 12 12 **Start Qty: 1.00** **Required Qty: 1.00**
D3672-3 ******
 Washer, Phenolic

Location	Loc Qty	Loc Code
FG	100	
133083	52	
134449	48	
FP001	213	
132639	213	
ST049	339	
151298	339	
ST051A	500	
149295	0	
153292	500	

N/A
 12.03.10
 17.03.10
 NAS114920416J

qty 6

Batch: 11131511

17103113

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date : _____		Step #: _____		QTY Effective : _____			MRB (QSI042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____		
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Picklist Print

Page 8

Wednesday, December 07, 2016 8:54:20 AM

Work Order ID: 154244

154244

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016

Required Date: 1/5/2017

D3683-3 Purchased No 250 Each 227.0000 12 12 Start Qty: 1.00 Required Qty: 1.00

D3683-3

Insert

Location	Loc Qty	Loc Code
FP001	34	
47805	34	
ST051	193	
47805	193	

ALS4-1032-130

AELS4-1032-130 Purchased

No

250

Each

3,050.000

42

42

ALS4-1032-130

Rivnut

Location	Loc Qty	Loc Code
CCK004	2264	
M135442	2264	
FG	50	FG
M135442	50	
FP001	728	
M133077	72	
M135442	656	
ST556	8	
M135442	8	

M136579

x112

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

Picklist Print

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Wednesday, December 07, 2016 8:54:20 AM

Work Order ID: 154244

154244

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016

Required Date: 1/5/2017

AN3C5A	Purchased	No	270	Each	1,250.000	44	44
--------	-----------	----	-----	------	-----------	----	----

Start Qty: 1.00

Required Qty: 1.00

AN3C5A

Bolt

**

JL 12/03/12

Location	Loc Qty	Loc Code	
FG	5	M136648	XJD
122800	5		
FP001	432		
M136295	432		
OVER002	600		
M136047	500		
M136182	100		
ST350	213		
M134676	13		
M135442	200		

NAS1149C0332R

Purchased

No

Each 5,224.000 44

NAS1149C0332R

WASHER

**

JL 12/03/12

Location	Loc Qty	Loc Code	
FP001	856	M136675	XJD
m135672	67		
m135948	130		
m136199	659		
GA	74		
m133284	74		
ST260a	3500		
m135466	1000		
m136042	500		
m136301	2000		
ST266	794		
m135408	94		
m135766	500		
m135908	200		

Wednesday, December 07, 2016 8:54:21 AM

Shop Packet Print

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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube ☐</td> <td style="width:15%;">Cross tube ☐</td> <td style="width:15%;">Water Jet ☐</td> <td style="width:15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition				Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
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OTHER : ☐																									

Picklist Print

Wednesday, December 07, 2016 8:54:21 AM

Work Order ID: 154244

154244

Parent Item: D119-646-143

D119-646-143

Parent Item Name: AW119 Repl. Skidtube with Wearplates & Wearpads, Float Comp. - Fits LH or RH

Start Date: 12/12/2016

Required Date: 1/5/2017

Start Qty: 1.00

Required Qty: 1.00

NAS1149C0463R

Purchased

No

Each

395.0000

12

**

NAS1149C0463R

Washer

N/A R 12/3/10

Location

Loc Qty

Loc Code

FP001

40

m127306

40

ST266

355

m134167

155

m136263

200

270

Each

240.0000

12

12

**

MS27039C4-08

Purchased

No

MS27039C4-08

SCREW

17.03.10

Location

Loc Qty

Loc Code

FP001

20

m126319

20

over006

15

m135895

15

ST276

205

m126319

117

m128429

88

Each

96.0000

2

**

MS24694-C52

Purchased

No

MS24694-C52

SCREW

Location

Loc Qty

Loc Code

FP001

92

m135978

92

ST285

4

m127059

4

12

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

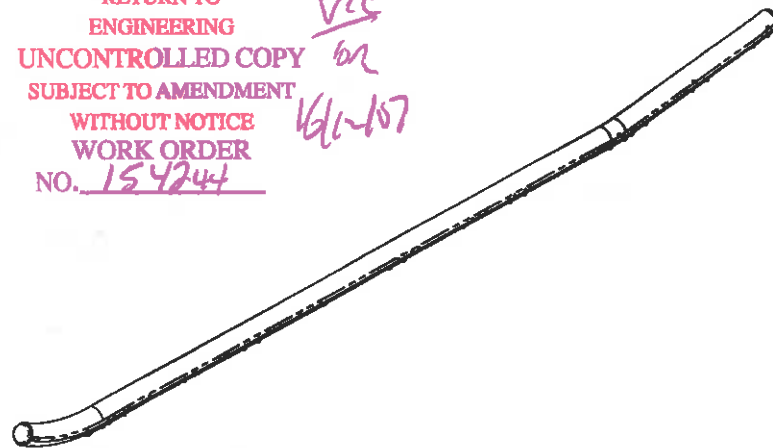
Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS <table style="width: 100%;"> <tr> <td style="width: 15%;">Skid-tube ☐</td> <td style="width: 15%;">Cross tube ☐</td> <td style="width: 15%;">Water Jet ☐</td> <td style="width: 15%;">Engineering ☐</td> </tr> <tr> <td>Machining ☐</td> <td>Small Fab ☐</td> <td>Prod. Eng. Coord. ☐</td> <td>Quality ☐</td> </tr> <tr> <td>Thermoforming ☐</td> <td>Finishing ☐</td> <td>Rec/Store/Packaging ☐</td> <td>Other ☐</td> </tr> <tr> <td>Large Fab ☐</td> <td>Composite ☐</td> <td>Supplier ☐</td> <td></td> </tr> </table>				Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
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Date :	Step #:	QTY Effective :	MRB (QSI042) Approval
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Description Work Order Deviation	Disposition	
		Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval

Root Cause <table style="width: 100%;"> <tr> <td style="width: 50%;"> Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ </td> <td style="width: 50%;"> No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐ </td> </tr> </table>	Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	<table style="width: 100%;"> <tr> <td style="width: 50%;"> Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ </td> <td style="width: 50%;"> FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ </td> <td style="width: 50%;"> Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ </td> <td style="width: 50%;"> Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐ </td> </tr> </table>	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	FAULT CATEGORY Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐
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OTHER : _____							

SHOP COPY
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UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 154244



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD (SHOWN)
D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE (SIMILAR)
D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE (SIMILAR)

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3885-3 FLOAT WEB PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2 BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3905-041 = 35.4 lbs
D3905-043 = 42.8 lbs
D3905-045 = 48.0 lbs
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 8.5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020" DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) INSERT D3885-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-281 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP
- 11) INSERT D3492-045 PLUG ASSY INTO $\phi 0.187$ HOLES (BOTH SIDES OF TUBE)
- 12) USE DART DRILL TEMPLATE DT8932 TO LOCATE AND DRILL $\phi 0.297$ HOLES FOR WEARPLATE INSERTS. INSTALL AELS-1032-130 INTO D3905-11 ONLY. INSTALL AN3C5A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-281.

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3905-041	FLOAT SKIDTUBE ASSY WITH WEARPAD
2		X		D3905-043	FLOAT SKIDTUBE ASSY WITH WEARPLATE
3			X	D3905-045	FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE
10	2	2	2	D2579	CROSS BOLT SPACER
11	2	2	2	D2655-3	CAP
12			16	D3411-3	WASHER
13	16	16		D3492-045	PLUG ASSY
14	2	2	2	D3672-1	PHENOLIC WASHER
16	8	8	8	D3881-1	SPACER
18	8	8	1	D3847-1	WEARPAD
17	1	1	1	D3847-11	WEARPAD
18		1		D3847-043	FWD WEARPLATE ASSY
19		1		D3847-045	CENTER WEARPLATE ASSY
20		1		D3847-049	AFT WEARPLATE ASSY
21			1	D3849-045	AFT WEARPLATE ASSY
22			1	D3849-047	FWD WEARPLATE ASSY
23	1	1	1	D3885-3	FLOAT WEB
24	12	12	12	D3903-1	SPACER
25			16	D3904-1	WASHER
26	1	1		D3905-11	FLOAT SKIDTUBE
27			1	D3905-13	FLOAT SKIDTUBE
28	6	6	6	D5101-3	INSERT
29	6	6	6	D5101-5	INSERT
30	3	3	3	D5101-041	CROSSBOLT SPACER ASSY
41	42	42	10	ALS4-1032-130	INSERT
42	44	44	12	AN3C5A	BOLT
43			4	AN3C46A	BOLT
44			4	AN3C50A	BOLT
45	3	3	3	AN4C46A	BOLT
46	44	44	8	NAS1149C0332R	WASHER (OR AN960C10L)
47	12	12	12	NAS1149C0463R	WASHER (OR AN960C416)
48	6	6	6	NAS1149D0416J	WASHER
49			8	MS21043-3	NUT
50	3	3	3	MS21043-4	NUT
51	2	2	2	MS24694-C62	SCREW

DEO ATTACHED

RELEASED

2016 NOV 26

SCN 14-828

APPROVED

D	REVISED DIMENSIONS AND PROVIDED TOLERANCE TO SKIDTUBE OVERALL LENGTH PAGE 5-6 REVISED NOTE 2 AND NOTE 7 PAGE 1 (ZN B8- ZN A8-1) REVISED -041/043-045 DRAWING VIEWS, REVISED SECTION VIEW F-F (ZN B4-7), REVISED BOM REF. PAR13-298 AND PAR13-272	AK	14.08.08
C	(SHT 1 PL, ZN C2-2, C2-3, C2-4) ITEM 13, QTY 2 WAS 4, ITEM 42 AND 46, QTY 44 WAS 48, ADD ITEM 48, MS24694-C62 WAS AN3C5A, D3672-1 AND NAS1149C0332R, (ZN C7-7) $\phi 0.297$ CSK $\phi 0.385 \times 100$ WAS $\phi 0.254$ THRU, (ZN A4-5, A4-6) ADD RELIEF INSTRUCTION, ADD ITEM 10, CROSS BOLT SPACER (ZN D4-1, C5-7, D8-7)	DB	13.02.21
B	REVISED PART LIST, ALS4-1032-130 WAS AELS-1032-130 (ZN A5-4, A5-6, C5-7, C5-8, A5-7), ADD DT8932 (ZN A8-1), D2655-3 WAS D2575 (ZN C8-2, C1-2, C8-3, C1-3, C5-4, C1-4), AN3C5A WAS AN3C4A (ZN C7-2, C1-2, C7-3, C1-3, C7-4, C1-4), D3849-047 WAS D3849-041 (ZN B3-4), ADD D3411-3 (ZN B3-4), ADD AN3C50A (ZN B3-4), $\phi 0.313$ WAS $\phi 0.320$ (B2-5, B2-6, C2-7, A8-7 & D7-8), REVISED NOTE 14 (ZN A8-7)	RF	09.06.30
D	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	ML		
DRAWN	RF		
CHECKED	VS		
MFG. APPR.	DD		
APPROVED	HS		
DE APPR.	DS		
DATE	14.08.08		

DART AEROSPACE USA, INC.
KENT, WA

DRAWING NO. **D3905** REV. D
SHEET 1 OF 8

TITLE **A119 FLOAT SKIDTUBE ASSY** SCALE NTS

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DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

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OTHER :																																																																							

DQA: _____ Date: _____

QA Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Date : _____

Step #: _____

QTY Effective : _____

Description Work Order Deviation

Disposition

MRB (QS1042) Approval

Completed By

Lead hand / Supervisor
Approval Verification

QC / QA Coordinator
Approval

Root Cause

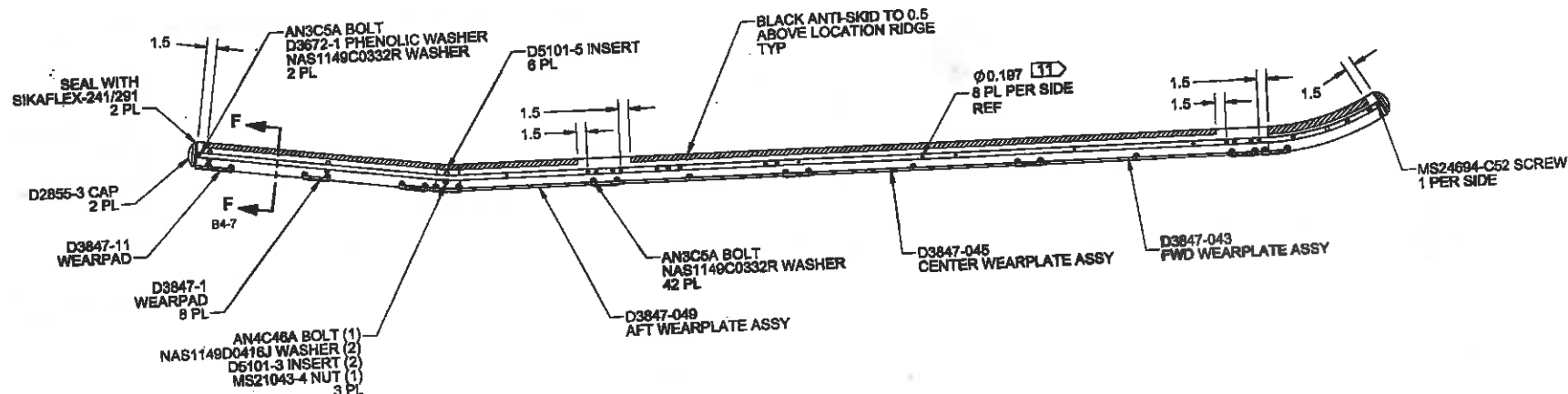
Environment ☐	No Re-verification ☐
Design ☐	Operator ☐
Doc/Data ☐	Offset/Setup ☐
Equip/Tooling ☐	Supplier ☐
Handling/Pre ☐	Training ☐
Material ☐	Use for Testing ☐
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Past Expiry Date ☐	Manufacturing Process ☐
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Pressure/Forced ☐
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FAULT CATEGORY

Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
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Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐

OTHER : _____



D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE
(MAKE FROM D3847-11 SKIDTUBE)

DEO ATTACHED

RELEASED

2010 NOV 24 07

APPROVED	DESIGN	ML	DART AEROSPACE USA, INC.	
	DRAWN	RF	KENT, WA	
	CHECKED	VS	DRAWING NO.	REV. D
	MFG. APPR.	DD	D3905	SHEET 2 OF 8
	APPROVED	HS	TITLE	SCALE
	DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
	DATE	14.08.08	COPYRIGHT © 2008 BY DART AEROSPACE USA, INC. THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL. ANY REUSE OR DISSEMINATION OF THIS DOCUMENT IS PROHIBITED. NOT TO BE USED FOR ANY PURPOSE OR COPIED OR REPRODUCED IN ANY OTHER FORM WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.	

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Large Fab ☐	Composite ☐	Supplier ☐	

Date : _____ Step #: _____

QTY Effective : _____

Description Work Order Deviation

Disposition

MRB (QSI042) Approval

Completed By

Lead hand / Supervisor
Approval Verification

QC / QA Coordinator
Approval

Root Cause

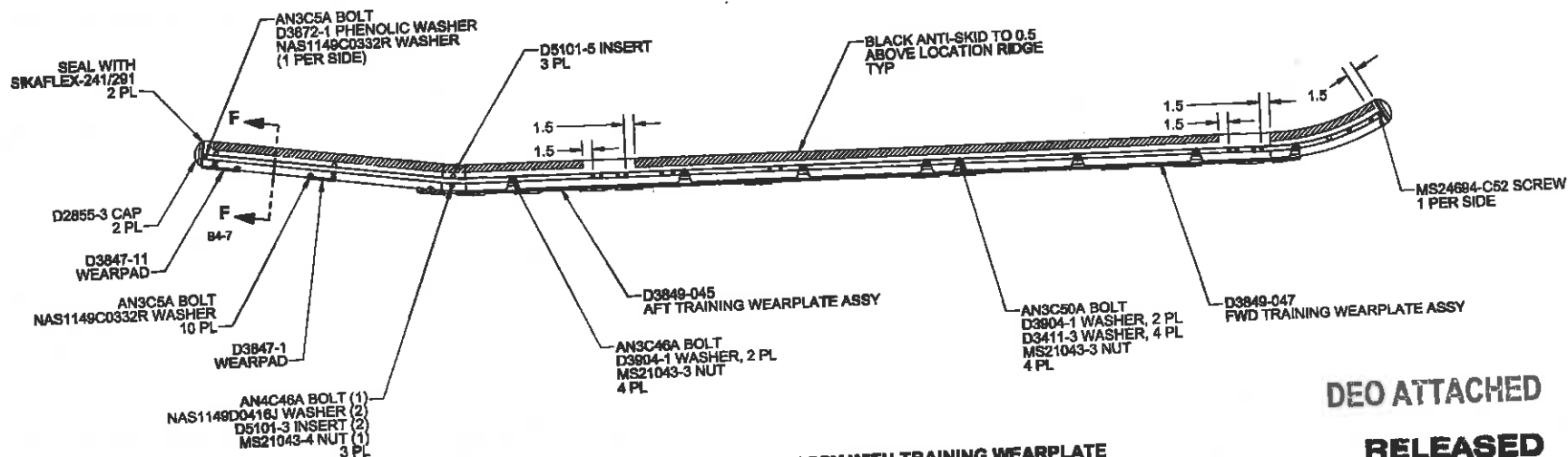
Environment ☐	No Re-verification ☐
Design ☐	Operator ☐
Doc/Data ☐	Offset/Setup ☐
Equip/Tooling ☐	Supplier ☐
Handling/Pre ☐	Training ☐
Material ☐	Use for Testing ☐
Internal Transport ☐	Poor Information ☐
Tribal Knowledge ☐	Rushing ☐
LOA ☐	Product Improvement ☐
Substation ☐	Process Improvement ☐
Past Expiry Date ☐	Manufacturing Process ☐
Misidentified ☐	Past Due ☐

Pressure/Forced ☐
 Bending ☐
 Centre Not Concentric ☐
 Cracks ☐
 Crimp/Kink/Ripple/Wave ☐
 Cuffs ☐
 Crushing ☐
 Heat Treat ☐
 Wave/Twist in Tube ☐
 Marks/Chatter ☐

FAULT CATEGORY

Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Contamination ☐	Out of Sequence ☐	Part Moved ☐
Countersink ☐	Off-set ☐	Drawing ☐
Cut Too Short ☐	Mislabeled ☐	Finish ☐
Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐

OTHER : _____



D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE
(MAKE FROM D3905-13 SKIDTUBE)

DEO ATTACHED

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DQA: _____ Date: _____

QA Closed: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐
Machining ☐
Thermoforming ☐
Large Fab ☐

Cross tube ☐
Small Fab ☐
Finishing ☐
Composite ☐

Water Jet ☐
Prod. Eng. Coord. ☐
Rec/Store/Packaging ☐
Supplier ☐

Engineering ☐
Quality ☐
Other ☐

Date : _____

Step #: _____

QTY Effective : _____

Description Work Order Deviation

Disposition

MRB (QSI042) Approval

Completed By

Lead hand / Supervisor
Approval Verification

QC / QA Coordinator
Approval

Root Cause

Environment ☐
Design ☐
Doc/Data ☐
Equip/Tooling ☐
Handling/Pre ☐
Material ☐
Internal Transport ☐
Tribal Knowledge ☐
LOA ☐
Substation ☐
Past Expiry Date ☐
Misidentified ☐
No Re-verification ☐
Operator ☐
Offset/Setup ☐
Supplier ☐
Training ☐
Use for Testing ☐
Poor Information ☐
Rushing ☐
Product Improvement ☐
Process Improvement ☐
Manufacturing Process ☐
Past Due ☐

Pressure/Forced ☐
Bending ☐
Centre Not Concentric ☐
Cracks ☐
Crimp/Kink/Ripple/Wave ☐
Cuffs ☐
Crushing ☐
Heat Treat ☐
Wave/Twist in Tube ☐
Marks/Chatter ☐

FAULT CATEGORY

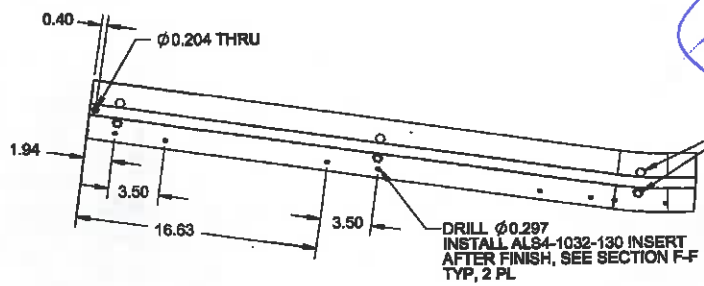
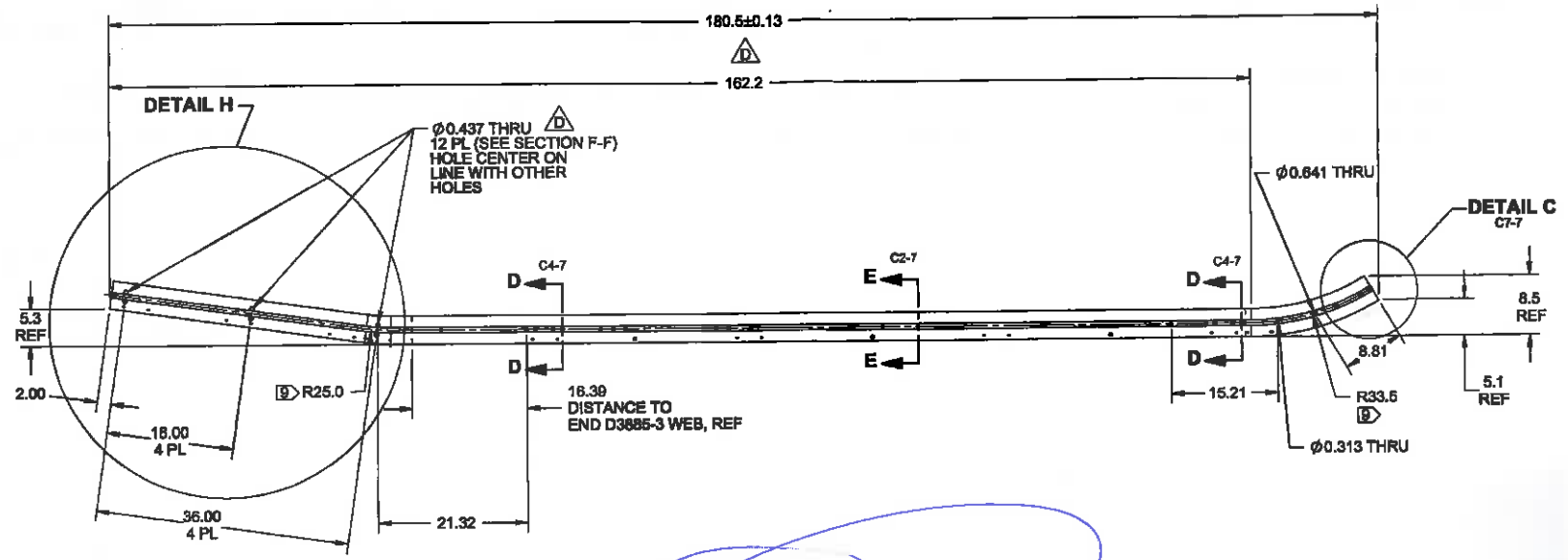
Temperature/Cure ☐
Set-up ☐
BOM/Route ☐
Broken/Damage/Defect ☐
Inspection Incomplete/Unqualified ☐
Contamination ☐
Countersink ☐
Cut Too Short ☐
Instructions Incomplete/Unclear ☐
Drill Holes ☐

Power Loss/Surge ☐
Folio/Program ☐
Grain ☐
Weld ☐
Wrong Stock Pulled ☐
Out of Sequence ☐
Off-set ☐
Misabeled ☐
Fit/Function ☐
Misaligned/off center ☐

Positioned Wrong ☐
Outside Dimensions ☐
Over/Under tolerance ☐
Part Incorrect ☐
Part Lost/Missing ☐
Part Moved ☐
Drawing ☐
Finish ☐
Misread ☐
Turning Sequence ☐

OTHER : _____

8 7 6 5 4 3 2 1



DETAIL H
SCALE 2X

D3905-11 FLOAT SKIDTUBE
(MARK FROM D3905-1 TUBE)

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8 7 6 5 4 3 2 1

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

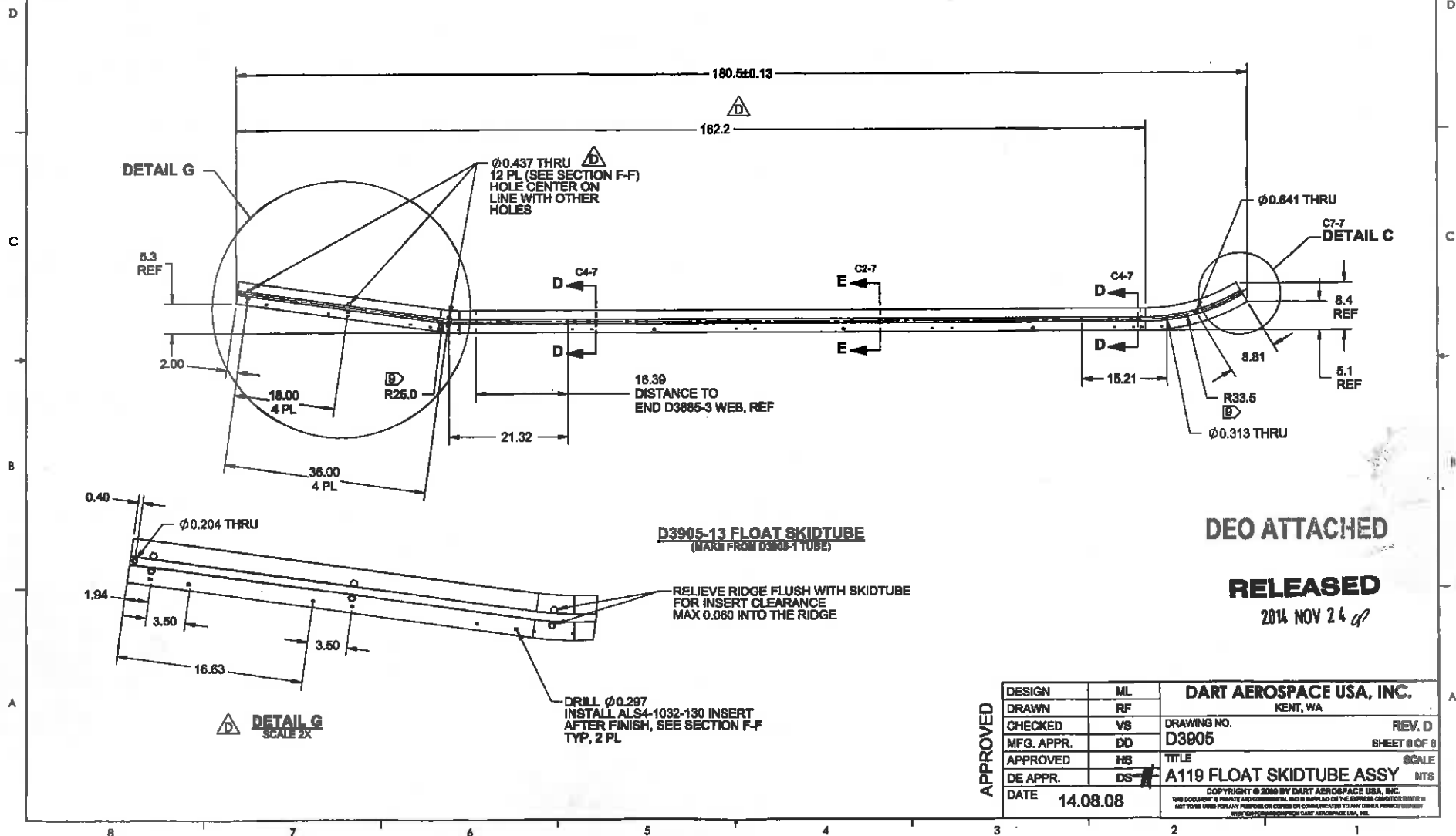


QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

8 7 6 5 4 3 2 1

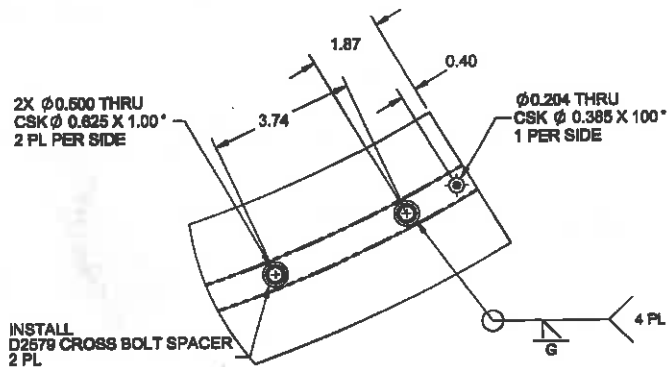




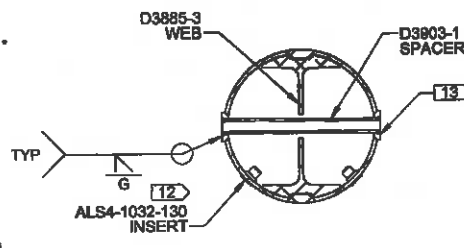
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AEROSPACE

Work Order update only ☐

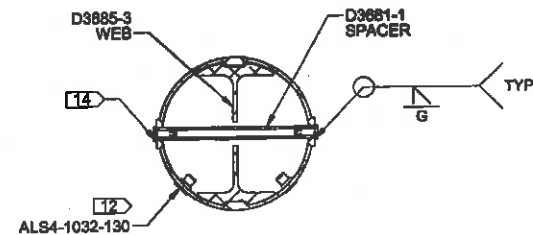
H:/FORMS/Quality Assurance\approved QA/NCRWO Rev I



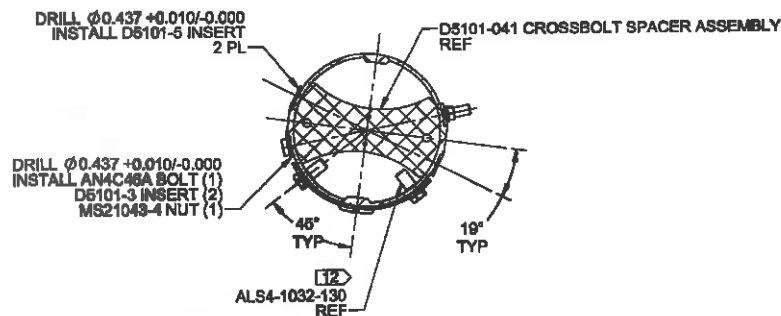
DETAIL C
SCALE 4X
C1-6
C1-8



SECTION D-D
SCALE 4X
C5-6
C2-6
C5-8
C2-8
(FOR 12 x Ø 0.375 HOLES
PER SKIDTUBE)



SECTION E-E
SCALE 4X
C4-6
C4-8
(FOR 8 x Ø 0.313 HOLES
PER SKIDTUBE)



SECTION F-F
SCALE 4X
C7-2
C7-3
C7-4

NOTES:

- 13) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø 0.375 HOLES ONLY:
i) CHAMFER HOLES Ø 0.475 x 45° (BOTH SIDES)
ii) INSERT D3903-1 SPACER
iii) WELD INTO PLACE AND GRIND FLUSH
iv) CBORE TO 0.313 x 0.75 DEEP
v) DEBURR HOLES
- 14) AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø 0.313 HOLES ONLY:
vi) CHAMFER HOLES Ø 0.354 x 45° OR 0.050 DEEP x 45° (BOTH SIDES)
vii) INSERT D3681-1 SPACER
viii) WELD INTO PLACE AND GRIND FLUSH
ix) DEBURR HOLES

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2014 NOV 24

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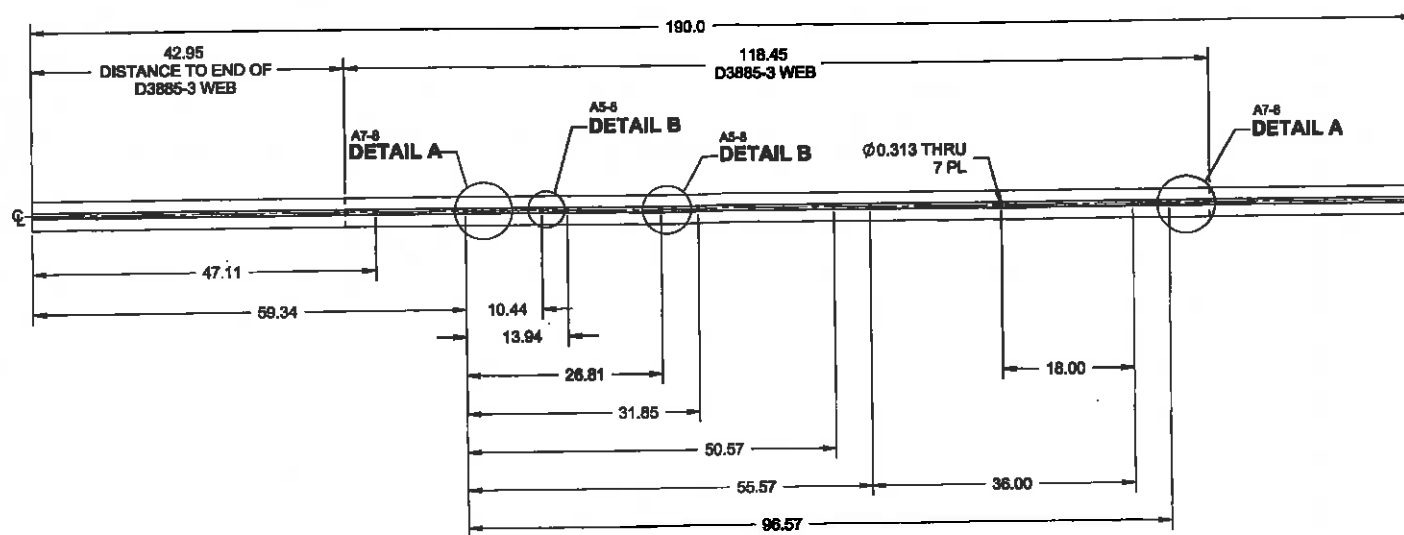


WORK ORDER NON-CONFORMANCE / UPDATE

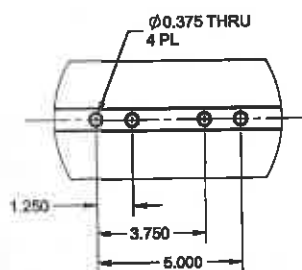
QA Closed: _____ Date: _____

Work Order update only ☐

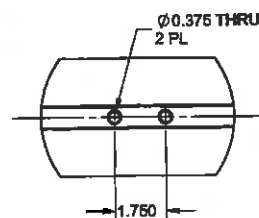
Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐								
OTHER : ☐									



D3905-1 TUBE
(MAKE FROM D2680-1-180 EXTRUSION)



DETAIL A D8-8
SCALE 4X D2-8



DETAIL B D5-8
SCALE 4X D4-8

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DQA: _____ Date: _____

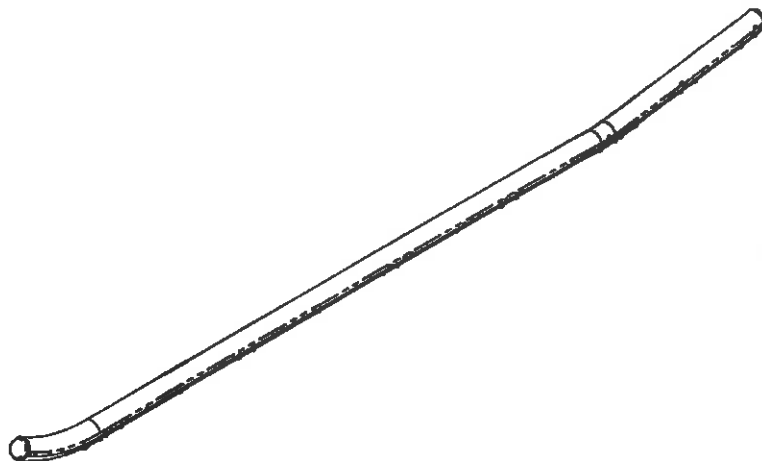
WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					
15									
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							



D3905-041 FLOAT SKIDTUBE ASSY WITH WEARPAD (SHOWN)
D3905-043 FLOAT SKIDTUBE ASSY WITH WEARPLATE (SIMILAR)
D3905-045 FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE (SIMILAR)

NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 PRIOR TO INSERTING D3885-3 FLOAT WEB PRIME (REF. 4.2.1.3.3) AND PAINT WHITE PER DART QSI 005 4.2
BLACK ANTI-SKID PAINT AS INDICATED TO 0.5 ABOVE LOCATION RIDGE PER DART QSI 005 4.4
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D3905-041 = 35.4 lbs
D3905-043 = 42.8 lbs
D3905-045 = 48.0 lbs
- 8) WELD PER DART QSI 004
- 9) DAMAGE TOLERANCE ON FWD BEND:
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 8.5 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP 0.020" DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
- 10) INSERT D3885-3 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH SIKAFLEX-241/-291 ADHESIVE PER DART QSI 016 BEFORE BENDING. ENSURE HOLES LINE-UP
- 11) INSERT D3492-045 PLUG ASSY INTO Ø0.197 HOLES (BOTH SIDES OF TUBE)
- 12) USE DART DRILL TEMPLATE DT8832 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARPLATE INSERTS. INSTALL AELS-1032-130 INTO D3905-11 ONLY. INSTALL AN3C5A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-291.

ITEM	QTY -041	QTY -043	QTY -045	P/N	DESCRIPTION
1	X			D3905-041	FLOAT SKIDTUBE ASSY WITH WEARPAD
2		X		D3905-043	FLOAT SKIDTUBE ASSY WITH WEARPLATE
3			X	D3905-045	FLOAT SKIDTUBE ASSY WITH TRAINING WEARPLATE
10	2	2	2	D2579	CROSS BOLT SPACER
11	2	2	2	D2856-3	CAP
12			16	D3411-3	WASHER
13	16	16		D3492-045	PLUG ASSY
14	2	2	2	D3872-1	PHENOLIC WASHER
16	8	8	8	D3881-1	SPACER
18	8	8	1	D3847-1	WEARPAD
17	1	1	1	D3847-11	WEARPAD
18		1		D3847-043	FWD WEARPLATE ASSY
19		1		D3847-045	CENTER WEARPLATE ASSY
20		1		D3847-049	AFT WEARPLATE ASSY
21			1	D3848-045	AFT WEARPLATE ASSY
22			1	D3848-047	FWD WEARPLATE ASSY
23	1	1	1	D3885-3	FLOAT WEB
24	12	12	12	D3903-1	SPACER
26			16	D3904-1	WASHER
28	1	1		D3905-11	FLOAT SKIDTUBE
27			1	D3905-13	FLOAT SKIDTUBE
28	6	6	6	D5101-3	INSERT
29	6	6	6	D5101-5	INSERT
30	3	3	3	D5101-041	CROSSBOLT SPACER ASSY
41	42	42	10	ALS4-1032-130	INSERT
42	44	44	12	AN3C5A	BOLT
43			4	AN3C48A	BOLT
44			4	AN3C50A	BOLT
45	3	3	3	AN4C48A	BOLT
46	44	44	8	NAS1149C0332R	WASHER (OR AN880C10L)
47	12	12	12	NAS1149C046SR	WASHER (OR AN880C418)
48	6	6	6	NAS1149D041BJ	WASHER
49			8	MS21043-3	NUT
50	3	3	3	MS21043-4	NUT
51	2	2	2	MS24894-C52	SCREW

DEO ATTACHED

RELEASED

2016 NOV 24

SCN 14-028

D	REVISED DIMENSIONS AND PROVIDED TOLERANCE TO SKIDTUBE OVERALL LENGTH PAGE 5-6 REVISED NOTE 2 AND NOTE 7 PAGE 1 (ZN B6, ZN A8-1) REVISED -041/-043/-045 DRAWING VIEWS, REVISED SECTION VIEW F-F (ZN B4-7), REVISED BOM REF. PARTS 298 AND PART 272	AK	14.08.08
C	(SHT 1 PL. ZN C3-2, C3-3, C3-4) ITEM 13, QTY 2 WAS 4 ITEM 42 AND 45, QTY 44 WAS 46, ADD ITEM 48, MS24894-C52 WAS AN3C5A, D3872-1 AND NAS1149C0332R, (ZN C7-7) Ø0.291 CSK Ø1.000 WAS Ø0.294 THRU, (ZN A4-4-8) ADD RELIEF INSTRUCTION, ADD ITEM 10, CROSS BOLT SPACER (ZN D4-1, C6-7, D6-7)	DB	13.02.21
B	REVISED PART LIST, ALS4-1032-130 WAS AELS-1032-130 (ZN A8-2, A8-3, C3-2, C3-3, A8-7), ADD DT8832 (ZN A8-1), D3885-3 WAS D2579 (ZN C5-2, C1-3, C8-3, C1-3, C8-4, C1-4), AN3C5A WAS AN3C4A (ZN C7-2, C1-2, C7-3, C1-3, C7-4, C1-4), D3848-047 WAS D3848-041 (ZN B3-4), ADD D3411-3 (ZN B5-4), ADD AN3C50A (ZN B3-4), Ø0.513 WAS Ø0.338 (B2-5, B2-6, C5-7, A8-7 & D7-5), REVISED NOTE 1 (ZN A5-7)	RF	09.06.30
D	NEW ISSUE	RF	09.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	ML	DART AEROSPACE USA, INC.	
DRAWN	RF	KENT, WA	
CHECKED	VS	DRAWING NO.	REV. D
MFG. APPR.	DD	D3905	SHEET 1 OF 8
APPROVED	HS	TITLE	SCALE
DE APPR.	DS	A119 FLOAT SKIDTUBE ASSY	NTS
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